

## CLAIMS

[30020382 US]

1. A method for determining a protocol of messages traversing a signalling link in a telecommunications network, comprising the steps of:  
5       predetermining at least one characteristic of a message in the protocol that can be used to distinguish that protocol from other protocols;  
          monitoring at least one signalling link carrying messages between two nodes of the telecommunications network;  
          determining whether the predetermined characteristic is present in the  
10   monitored message; and  
          identifying the signalling link as carrying messages in the particular protocol if the predetermined characteristic is present in the monitored message.
2. A method of determining a protocol according to claim 1, wherein the  
15   predetermined characteristic includes a plurality of characteristics that can be used to distinguish the protocol to be identified.
3. A method of determining a protocol according to claim 1, wherein the  
20   monitored message is analysed to determine whether different predetermined characteristics for distinguishing different protocols is/are present in the monitored message.
4. A method of determining a protocol according to claim 1, wherein a  
25   plurality of messages on the signalling link are analysed to determine whether one or more of the predetermined characteristics is/are present in the monitored messages.
5. A method of determining a protocol according to claim 1, further  
30   comprising the step of storing a confidence measure providing an indication of the confidence of an identification of the signalling link as carrying messages in a particular protocol.
6. A method of determining a protocol according to claim 5, wherein the

confidence measure includes a count of the number of messages on the signalling link that are identified as being in the particular protocol.

7. A method of determining a protocol according to claim 6, wherein the confidence measure is incremented each time a message on the signalling link is identified as being in the particular protocol and decremented each time a message on the signalling link is identified as being in a different protocol.
8. A method of determining a protocol according to claim 5, further including the step of determining whether the confidence measure has reached a predetermined threshold level and identifying the signalling link as carrying messages in the particular protocol only if the confidence measure has reached the predetermined threshold level.
9. A method of determining a protocol according to claim 1, wherein the protocol to be distinguished includes at least one of LAPD and MTP.
10. Apparatus for determining a protocol of messages traversing a signalling link in a telecommunications network, comprising:
  - a memory for storing at least one predetermined characteristic of a message in the protocol that can be used to distinguish that protocol from other protocols;
  - a monitoring means for monitoring at least one signalling link carrying messages between two nodes of the telecommunications network; and
  - determination means coupled to the monitoring means and the memory for determining whether the predetermined characteristic is present in the monitored message and for identifying the signalling link as carrying messages in the particular protocol if the predetermined characteristic is present in the monitored message
11. Apparatus for determining a protocol according to claim 10, wherein the determination means determines whether a monitored message includes different predetermined characteristics for distinguishing different protocols and

identifies the signalling link as carrying messages in the particular protocol if the monitored message is determined as having the particular predetermined characteristic distinguishing that particular protocol.

5     12.     Apparatus for determining a protocol according to claim 10, further comprising a confidence measure indicator coupled to the determination means for indicating the confidence of an identification of the signalling link as carrying messages in a particular protocol.

10    13.     Apparatus for determining a protocol according to claim 12, wherein the confidence measure indicator is incremented each time a message on the signalling link is identified as being in the particular protocol and decremented each time a message on the signalling link is identified as being in a different protocol.

15     14.     Apparatus for determining a protocol according to claim 12, wherein the determination means checks whether the confidence measure has reached a predetermined threshold level and identifies the signalling link as carrying messages in the particular protocol only if the confidence measure indicator has  
20    reached the predetermined threshold level.

15     15.     Apparatus for determining a protocol according to claim 10, wherein the protocol to be distinguished includes at least one of LAPD and MTP.

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